placing at least one sensor capable of sensing pH into said flow section within said catheter to enable said CSF to flow adjacent said sensor so that said sensor may sense at least one characteristic, including pH, of said CSF; and

monitoring changes of said at least one characteristic of said CSF within the initial 48 hours following head trauma to predict the outcome of the head trauma.

11. (Previously presented) The method of claim 10, whereby said region of CSF is a cerebral ventricle.

12. (Previously presented) The method of claim 10, further comprising:

fixing said catheter in place in said opening of said skull to prevent movement of said catheter relative to said opening in said skull.

13. (Previously presented) The method of claim 10, whereby said inserting step further comprises:

inserting said catheter into said region of CSF until expression of said CSF indicates said catheter has reached said cerebral ventricle.

14. (Previously presented) The method of claim 10, further comprising:

connecting said catheter to an extension tube; and

locking said sensor within said catheter.

15. (Previously presented) The method of claim 14, further comprising:

draining said CSF through said catheter, wherein said monitored characteristic further includes intracranial pressure.

16. (Previously presented) The method of claim 10, whereby said characteristic monitored further includes a characteristic selected from the group consisting of partial oxygen pressure, temperature, carbon dioxide concentration, and combinations thereof.

17. (Previously presented) The method of claim 16, whereby the pH of said CSF is monitored and compared with a base line.

18. (Previously presented) The method of claim 10, further comprising:

monitoring said characteristic on a continuous basis;

collecting data regarding said characteristic;

storing said data; and

comparing said data.

19. (Previously presented) The method of claim 10, whereby said monitoring step comprises:

monitoring said characteristic within the initial 24 hours following trauma.

20. (Previously canceled)

21. (Currently amended) A method of monitoring at least one characteristic of cerebrospinal fluid (CSF) of a patient for prognosis and for providing information for treatment, comprising:

providing an opening in said patient through which a region of CSF is accessible;

inserting a catheter through said opening into said region of CSF in said patient, said catheter having a flow section capable of permitting said CSF to flow therein;

positioning said flow section of said catheter into said region of CSF;

placing at least one sensor capable of sensing pH into said flow section within said catheter to enable said CSF to flow adjacent said sensor so that said sensor may sense at least one characteristic, including pH, of said CSF; and

monitoring changes of said at least one characteristic of said CSF within the initial 48 hours following head trauma to predict the outcome of the head trauma.

22. (Previously presented) The method of claim 21, further comprising:

fixing said catheter in place in said opening of said patient to prevent movement of said catheter relative to said opening in said patient.

23. (Previously presented) The method of claim 21, whereby said inserting step further comprises:

inserting said catheter into said region of CSF until expression of said CSF indicates said catheter has reached said region of CSF.

24. (Previously presented) The method of claim 21, further comprising:

connecting said catheter to an extension tube; and

locking said sensor within said catheter.

25. (Previously presented) The method of claim 24, further comprising:

draining said CSF through said catheter.

26. (Previously presented) The method of claim 21, whereby said characteristic monitored further includes a characteristic selected from the group consisting of partial oxygen pressure, temperature, carbon dioxide concentration, and combinations thereof.

27. (Previously presented) The method of claim 26, whereby the pH of said CSF is monitored and compared with a base line.

28. (Previously presented) The method of claim 21, further comprising:

monitoring said characteristic on a continuous basis;

collecting data regarding said characteristic;

storing said data; and

comparing said data.

29. (Previously presented) The method of claim 21, whereby said monitoring step comprises:

monitoring said characteristic within the initial 24 hours following trauma.

30. (Previously canceled)

31. (Previously presented) An apparatus for monitoring the cerebral cellular environment of a patient, comprising:

a catheter having a wall section adapted to permit cerebrospinal fluid (CSF) to flow therein, said catheter adapted for introduction through an opening in a skull of a patient; and

at least one sensor capable of sensing pH located within a porous sheath, wherein said porous sheath is located within said catheter such that said CSF is permitted to flow through said porous sheath and adjacent said sensor;

whereby said sensor is capable of permitting monitoring of at least one characteristic, including pH, of said CSF over time.

32. (Previously presented) The apparatus of claim 31, whereby said catheter is a dual lumen catheter comprising a first lumen and a second lumen.

33. (Previously presented) The apparatus of claim 32, whereby said sensor is housed in said first lumen and said CSF is withdrawn through said second lumen.

34. (Previously presented) The apparatus of claim 31, whereby said characteristic monitored further includes a characteristic selected from the group consisting of partial oxygen pressure, temperature, carbon dioxide concentration, and combinations thereof.

35. (Previously presented) The apparatus of claim 31, further comprising:

equipment for monitoring, storing, and, comparing data of said characteristic from said sensor over time.

36. (Previously presented) An apparatus for monitoring at least one characteristic of cerebrospinal fluid (CSF) of a patient, comprising:

a catheter having a wall section adapted to permit said CSF to flow therein, said catheter adapted for introduction through an opening in said patient through which a region of CSF is accessible; and

at least one sensor capable of sensing pH located within a porous sheath, wherein said porous sheath is located within said catheter such that said CSF is permitted to flow through said porous sheath and adjacent said sensor;

whereby said sensor is capable of permitting monitoring of at least one characteristic, including pH, of CSF over time.

37. (Previously presented) The apparatus of claim 36, whereby said catheter is a dual lumen catheter comprising a first lumen and a second lumen.

38. (Previously presented) The apparatus of claim 37, whereby said sensor is housed in said first lumen and said CSF is withdrawn through said second lumen.

39. (Previously presented) The apparatus of claim 36, whereby said characteristic monitored further includes a characteristic selected from the group consisting of partial oxygen pressure, temperature, carbon dioxide concentration, and combinations thereof.

40. (Previously presented) The apparatus of claim 36, further comprising:

equipment for monitoring, storing, and, comparing data of said characteristic from said sensor over time.